

# 2009 Fatalgram Review

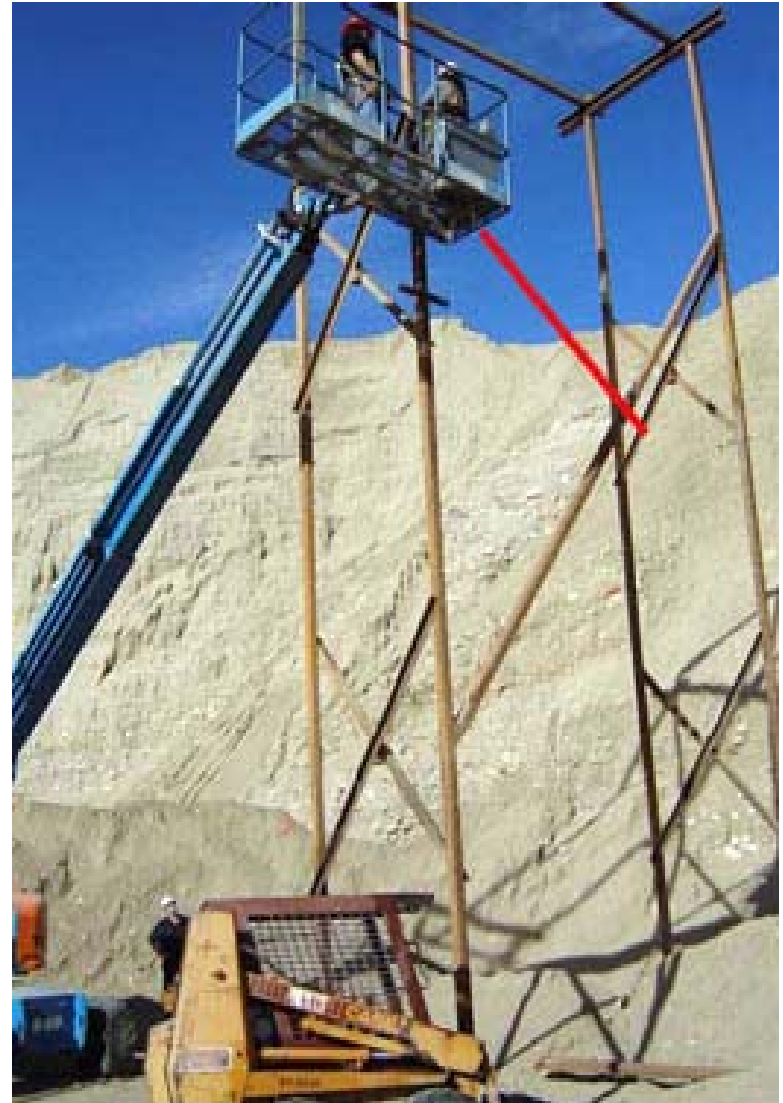
Metal NonMetal

As of 8-24-2009

# Fatality #1 - January 6, 2009

## Falling/Sliding Material

- 41 year-old laborer with 3 years of experience was injured at a sand and gravel operation. The victim was operating a skid steer loader underneath a belt conveyor that was being dismantled. Two coworkers were in an elevated manlift removing a 12-foot piece of 4-inch metal tubing from the leg supports of the belt conveyor frame. The tubing fell into the front of the skid steer loader as it approached the work area, striking the victim.



# Best Practices

- Establish and review procedures to ensure all possible hazards have been identified and appropriate controls are in place to protect persons before beginning work. Discuss procedures with all persons present in the work area.
- •
- Establish policies to ensure that barricades or warning signs are installed to prohibit access and protect persons from falling object hazards.
- •
- Remove all persons from beneath the area where overhead work is being performed.

# Fatality #2 - January 17, 2009

## Falling/Sliding Material

- On January 17, 2009, a 48 year-old mill operator with 22 weeks of experience was fatally injured at a crushed stone milling operation. The victim was loading material into a hopper with a front-end loader. He entered the hopper to dislodge frozen bridged material that would not feed onto the belt conveyor below. Coworkers found the victim engulfed in the hopper.



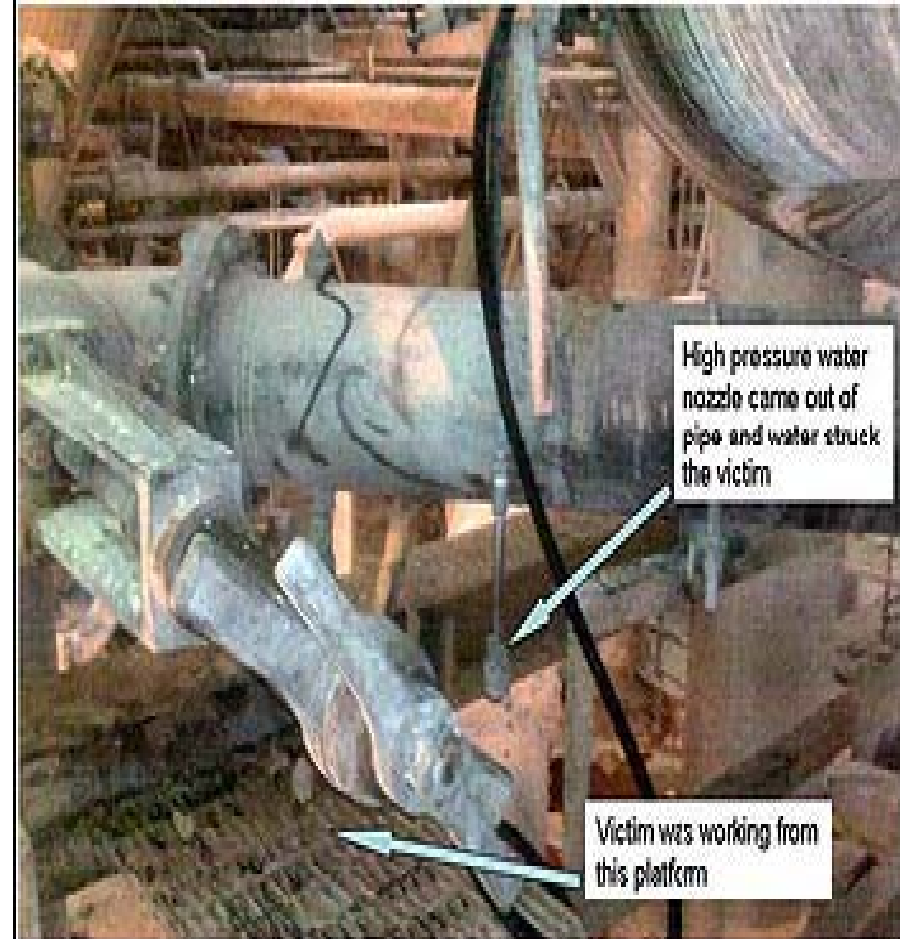
# Best Practices

- Establish and review procedures to ensure all possible hazards have been identified and appropriate controls are in place to protect persons before beginning work.
- •
- Train miners in safe work procedures and hazard recognition, specifically when clearing blocked hoppers.
- •
- Lock out discharge operating controls.
- •
- Ensure a safety harness properly secured to a lanyard is worn and a second person is positioned outside to adjust the lanyard.
- •
- Management should routinely monitor these activities to ensure miners are protected from possible hazards.
- •
- Provide vibrating shakers to maintain material flow or mechanical means of safely removing material if hoppers experience recurring flow problems.

# Fatality #3 - January 31, 2009

## Machinery - Texas - Alumina

- a 40 year-old contractor technician with 36 weeks of experience was fatally injured at an alumina milling operation. He was cleaning hydrate that had built up inside a 30-inch pipe in the plant. The victim was using a high pressure water hose when the unrestrained hose end and attachment blew out of the pipe. He was struck by the water.



# Best Practices

- Establish, review, and follow procedures to ensure all hazards are identified and controls are used to protect persons before beginning work.
- •
- Train persons on hazards and safe work procedures for high pressure water cleaning.
- •
- Ensure that operators are in a safe position and have control of their equipment at all times.
- •
- Install barricades or warning signs to prohibit access.
- •
- Follow equipment manufacturers' operating instructions.
- •
- Provide emergency stop/depressurization control.
- •
- Maintain sight or voice communications between person operating the high pressure nozzle and person operating the controls.
- •
- Use special protective equipment and clothing.
- •
- Contractor and mine management should routinely monitor work activities to ensure safe operating procedures are followed and persons are protected from hazards.

# Fatality #4 - April 7, 2009 Electrical - Iowa - Construction Sand and Gravel

- a 36 - year old supervisor with 15 years of experience was fatally injured at a sand and gravel dredging operation. The victim was attempting to connect the 4160 volt cable for the dredge to load side terminals in the electrical panel when he came into contact with energized 4160 volt line side terminals.

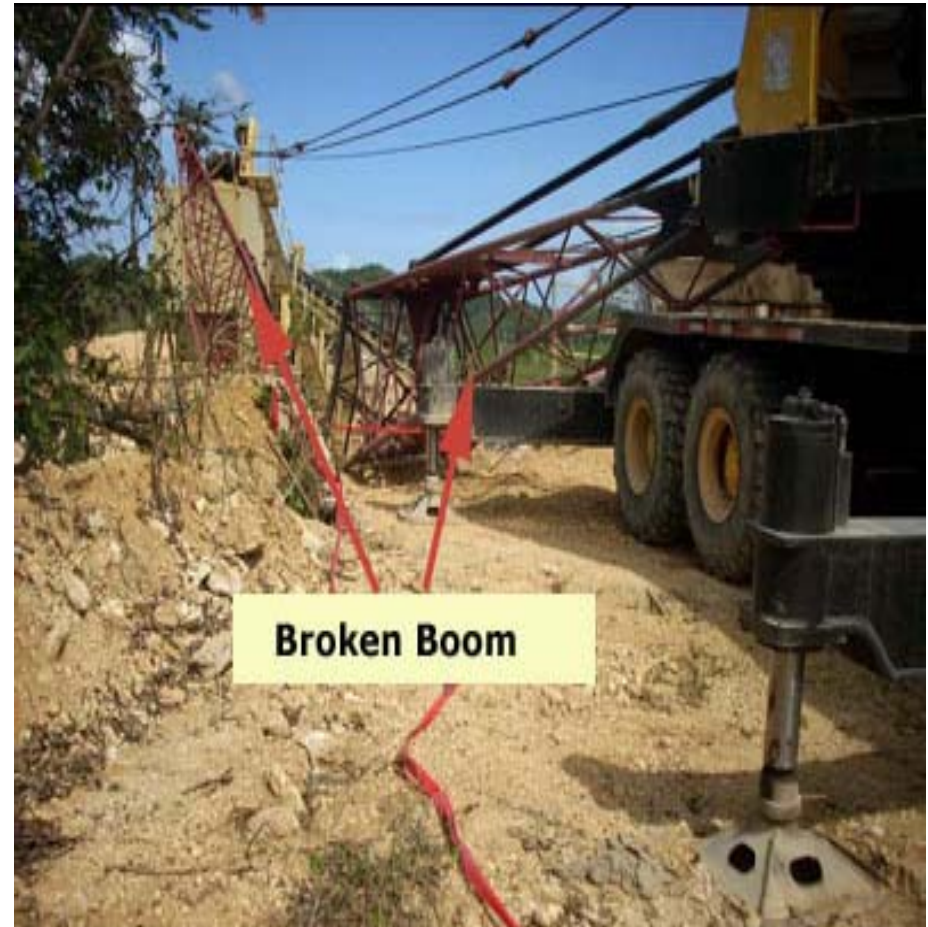


# Best Practices

- Be trained and knowledgeable in the task.
- •
- Be trained on all the electrical test and safety equipment necessary to safely test and ground the circuit being worked on.
- •
- Use properly rated Personal Protective Equipment including Arc Flash Protection such as a hood, gloves, shirt, and pants.
- •
- Positively identify the circuit on which work is to be conducted.
- •
- De-energize power and ensure that the circuit is visibly open.
- •
- Place YOUR lock and tag on the disconnecting device.
- •
- Verify the circuit is de-energized by testing for voltage using properly rated test equipment.
- •
- Ensure all electrical components in the cabinet are de-energized.
- •
- Ground ALL phase conductors to the equipment grounding medium with grounding equipment that is properly rated.

# Fatality #5 - February 19, 2009 (Victim Died April 12, 2009) Machinery - Puerto Rico - Dimension Limestone

- a 61 year-old laborer with 12 years of experience was injured at a sand and gravel operation when he was struck by a crane's falling boom. The crane was lifting a crusher and the victim was acting as a signalman when the accident occurred. He was hospitalized and died on April 12, 2009, as a result of his injuries.

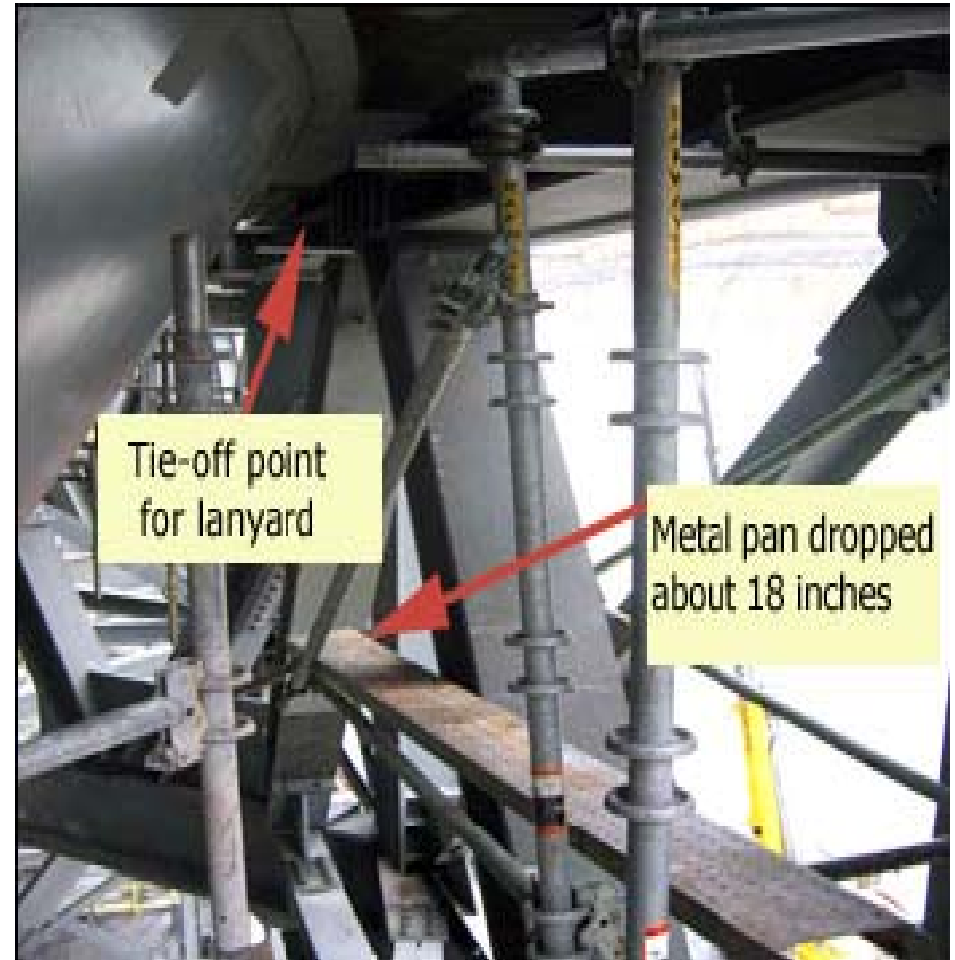


# Best Practices

- Prior to attempting a lift, know the weight of the load (including the load block and rigging) and make sure it is less than the crane's lifting capacity for the required reach. Refer to applicable load charts. •
- Perform a thorough pre-operational inspection of the crane and rigging components. •
- Stay clear of a crane's overhead boom and do not work beneath a suspended load. •
- Always be certain that the object being lifted is completely detached from its supporting structure prior to attempting a lift. •
- Insure that the crane turntable is level prior to lifting. •
- Make sure the load is aligned directly beneath the centerline of the boom to prevent side loading. •
- Confirm that the load will not exceed the allowable capacity of the rigging. •
- Follow the crane manufacturer's recommendations when making structural repairs and use certified welders.

# Fatality #6 - April 14, 2009 Slip/Fall of Person - Missouri - Limestone (C&B)

- a 38 - year old contractor carpenter with 8 years of experience was fatally injured at a cement plant under construction. While dismantling a section of scaffolding, the victim lost his balance and fell when one end of the metal pan on which he was standing shifted unexpectedly. As he fell backward, the victim's safety lanyard slipped off the end of the horizontal scaffold to which he was tied.



# Best Practices

- Train persons to recognize the hazards associated with the type of scaffold being used and how to control or minimize those hazards.
- •
- Wear fall protection where there is a danger of falling.
- •
- Where possible anchor fall protection to permanent support structure.
- •
- Follow the manufacturer's procedures for assembly and disassembly of scaffold systems.
- •
- Ensure that scaffolding is properly connected and braced to prevent side sway.
- •
- Prior to using scaffolding, inspect the structure to ensure that it has not been altered.

# Fatality #7 – April 21, 2009 Falling Material - Tennessee - Construction Sand and Gravel

- a 51-year old contract laborer with 3 years of experience was fatally injured at a sand and gravel dredging operation. The victim was inside an excavation ditch while an excavator was maneuvering a concrete box into place. The chain used to attach the four leg sling from the box to the excavator broke. The box fell into the hole and struck the victim crushing him.



# Best Practices

- Identify hazards associated with the task to be performed, review those hazards with all personnel involved, and implement measures to ensure persons are properly protected.
- •
- Communicate lift plans to all persons working in the lift zone to ensure that no one is under a suspended load.
- •
- Stay clear of a suspended load.
- •
- Attach taglines to loads that may require steadying or guidance while suspended.
- •
- Use sling or chain assemblies (rigging) specifically intended for lifting and adequately rated for the loads being lifted.
- •
- Carefully inspect all rigging prior to each use.

# Fatality #8 - May 1, 2009

## Machinery - Texas - Construction Sand and Gravel

- a 59-year old dredge
- operator with 3 years of experience was fatally injured at a dredging operation.
- The victim was trying to manually guide the wire cable onto one of two
- positioning winches on the dredge when he became entangled in it.



# Best Practices

- Conduct a complete pre-operational inspection of equipment that includes
  - checking winches and cables.
  - • Install new winch cables to reel in the same direction as the old cable.
  - • Inspect winches to confirm proper reeling of the cable.
  - • Assign two persons to perform maintenance tasks on dredges.
  - • Block equipment against hazardous motion before performing maintenance tasks.
  - • Label valve bank levers to indicate direction of movement.
  - • Do not wear loose clothing when working near moving machine parts.

# Fatality #9 - May 2, 2009 Powered Haulage - Georgia - Clay

- a 51-year old front-end loader operator with 8 weeks of experience was fatally injured at a surface clay operation. The victim parked a front-end loader on a loading ramp and was run over by the machine after he exited it.

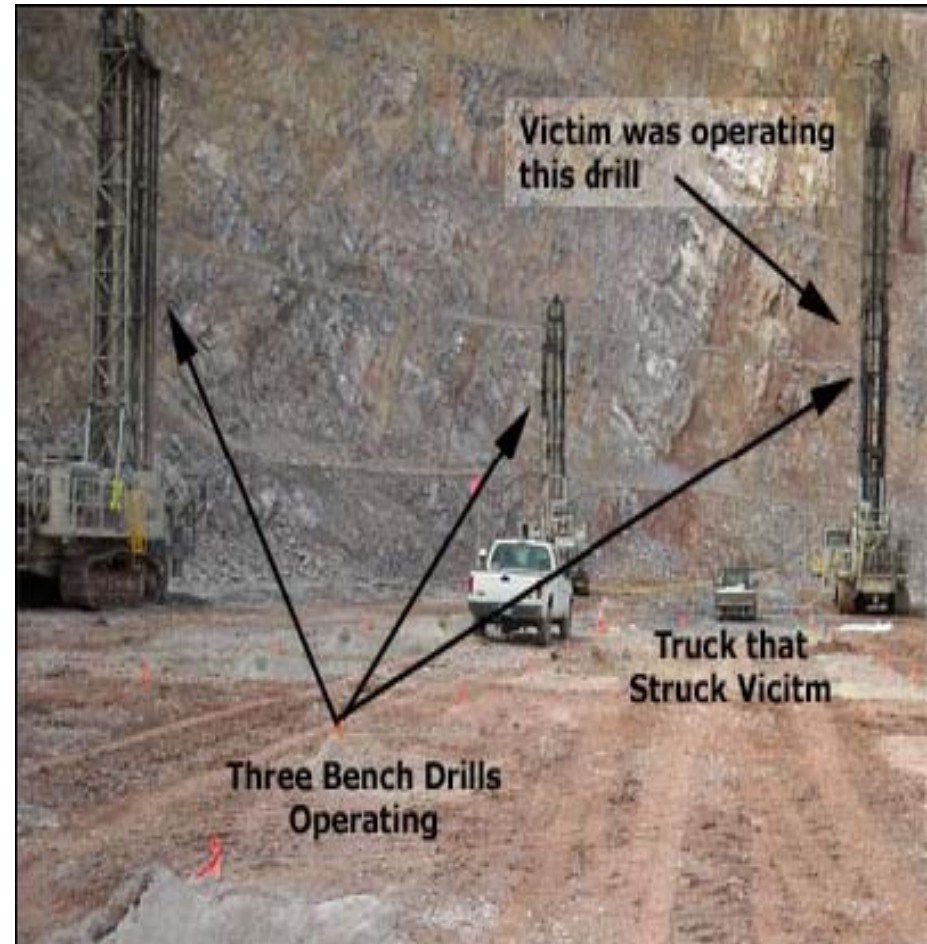


# Best Practices

- Keep unauthorized persons out of the cabs of mobile equipment.
- •
- Never leave mobile equipment unattended unless the controls are placed in the park position and the parking brake is set.
- •
- Lower the bucket to the ground when parking mobile equipment.
- •
- Chock or turn the wheels when parked on a grade.

# Fatality #10 – June 6, 2009 Powered Haulage - Nevada - Gold Ore

- a 57-year old surface driller with 27 years of experience was fatally injured at a surface gold mine. The victim was drilling in a pit, exited the drill, and was walking in the drill area when he was struck by a flatbed truck as it backed up. The truck was in the area to collect drill cutting sample bags.

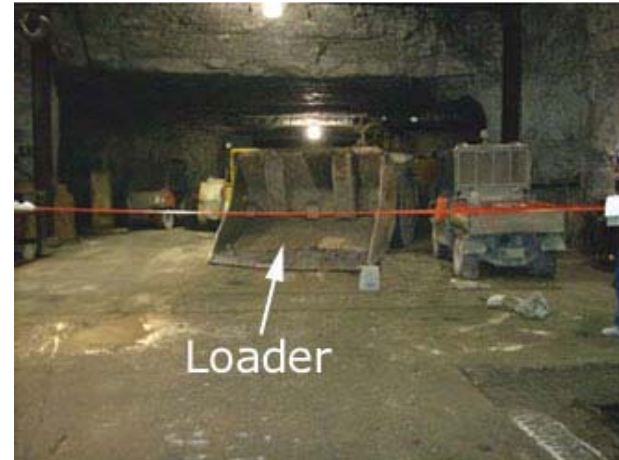


# Best Practices

- Before moving mobile equipment, look in the direction of travel, use all mirrors, cameras, and installed proximity detection devices to ensure no one is in the intended path.
- •
- Sound the horn to warn persons of movement and wait to give them time to get to a safe location.
- •
- Operate mobile equipment at reduced speeds in work areas.
- •
- Do not operate mobile equipment in reverse for extended distances when it is possible to travel forward.
- •
- Be aware of the location of mobile equipment in your work area before exiting your equipment.
- •
- Communicate with mobile equipment operators and ensure they acknowledge your presence.
- •
- Wear high visibility clothing when working around mobile equipment.
- •
- Train all miners to recognize work place hazards.

# Fatality #11 – June 11, 2009 Powered Haulage - Missouri - Lead-Zinc Ore

- a 57-year old mechanic with 31 years of experience was fatally injured at an underground lead/zinc mine while checking for a hydraulic leak on a loader. The victim leaned into the ejector plate relief port in the back of the loader bucket. The ejector plate of the bucket was retracted, crushing him against the back of the bucket.



# Best Practices

- Train persons to recognize work place hazards.
  - Establish safe work procedures before a task is performed.
- • Securely block equipment and components against hazardous motion at all times while performing maintenance work.
- If equipment and components are to be moved, always verify persons are aware and in a safe location prior to movement. •
- Consult and follow the manufacturer's recommended safe work procedures for the maintenance task.

# Fatality #12 -June 20, 2009 Fall of Roof or Back - Louisiana - Salt

- a 52-year old equipment oiler/greaser with 24 years of experience was fatally injured at an underground salt mine. He was cleaning equipment when a large roof fall occurred.



# Best Practices

- When ground conditions create a hazard to persons, install effective ground support before other work is permitted in the affected area.
- •
- Design, install, and maintain a support system to control the ground in places where persons work or travel.
- •
- Examine and test ground conditions in areas where work is to be performed prior to work commencing and as ground conditions warrant during the shift.
- •
- Be alert to any change of ground conditions.
- •
- Identify and scale loose ground from a location which will not expose persons to falling material.

# Fatality #13 - July 2, 2009 Machinery - Pennsylvania - Dimension Stone NEC

- a 52-year old mine owner with 34 years of experience was fatally injured at a surface dimension stone operation. He was working alone and was operating a walk behind masonry saw on a ledge. Apparently he was positioned between the saw and the edge when he tripped and fell. The victim and the saw went over the 9-foot ledge and the saw fell on him.



# Best Practices

- Identify all hazards and use appropriate controls to protect persons.
- •
- Ensure that operators are in a safe position and have control of their equipment at all times.
- •
- Keep workplaces free of tripping hazards.
- •
- Use barricades or railings at edges of drop-offs where persons are in danger of falling.
- •
- Equip walk behind masonry saws with devices to stop the engine if the operator can not maintain control of the equipment.
- •
- Design bench top stone cutting patterns so the saw operator is not positioned between the saw and the drop off edge.